Scientific Inquiry

K-1 The student will demonstrate an understanding of scientific inquiry, including the processes, skills, and mathematical thinking necessary to conduct a simple scientific investigation.

K-1.3 Predict and explain information or events based on observations or previous experience.
Taxonomy Level: 2.5-A and 2.7-A Understand Factual Knowledge

Previous/Future knowledge: As with other indicators at this grade level, students will experience their first formal introduction to important science skills and processes. The development of these skills and processes will serve as the basis for all future science investigations. In 2nd grade (2-1.4), students will infer explanations regarding scientific observations and experiences. In 3rd grade (3-1.4), students will predict the outcome of a simple investigation. This is the first time students have been introduced to the process skills of predicting and explaining. Students will use these skills to interpret observations throughout their scientific education.

It is essential for students to know that the observations made about objects or events and previous experiences can be used to predict what might happen. To make a prediction:

- Make observations and think about what is known about the object or event.
- Tell what will happen next.

Observations can also be used to explain (communicate) what is happening in an investigation.

NOTE TO TEACHER: When predicting, students should form an idea about an expected result based on present knowledge, understandings, and observations. When explaining, students should use spoken words and drawings. Teachers may want to introduce students to other forms of communication such as diagrams, tables, or graphs to communicate information and ideas.

It is not essential for students to make inferences about objects or events or go beyond introductory skills of predicting and explaining at this time.

Assessment Guidelines:
One objective of this indicator is to *predict* information or events based on observations or previous experience; therefore, the primary focus of assessment should be to tell what will happen next based on observations or experiences. However, appropriate assessments should also require students to *recall* what is needed to make a prediction.

Another objective of this indicator is to *explain* information or events based on observations or previous experience; therefore, the primary focus of assessment should be to construct cause and effect models of what has happened based on their observations or experiences. However, appropriate assessments should also require students to *summarize* the major points about information or events.